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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,646	02/22/2002	Robert Norman Rice	37921-2	1954
20872	7590	02/25/2004		
MORRISON & FOERSTER LLP 425 MARKET STREET SAN FRANCISCO, CA 94105-2482			EXAMINER SISSON, BRADLEY L	
			ART UNIT	PAPER NUMBER

1634

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/081,646

Applicant(s)

RICE ET AL.

Examiner

Bradley L. Sisson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004 and 26 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-7 and 10-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7 and 10-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. The Office action of 08 January 2004 is hereby vacated. A non-final Office action on the merits follows.

Duplicate Claim Warning

2. Applicant is advised that should claim 3 be found allowable, claim 5 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Specification

3. The objection to the title has been withdrawn in view of the amendment to same.

4. The use of the trademarks TAQ, DYNABEADS, Opti-MEM, GENETICIN, BECKMAN, FALCON, EPPENDORF, RPMI, UNIVAR, AMBION, SIGMA, DYNAL, TAQMAN have been noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner that might adversely affect their validity as trademarks.

Response to argument

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5. At page 12 of the response of 26 November 2003 applicant states:

Applicants agree that the trademarks should be capitalized wherever they appear in the Specification. Applicants also agree that the proprietary nature of the marks will be respected and that every effort will be made to prevent their use in any manner that might' adversely affect their validity as trademarks.

It is noted, however, that the response does not amend the specification so to incorporate the generic terminology of the products identified through a trademark. In view of the specification not being so amended, the specification remains objected to.

Claim Objections

6. The objection to the claims in regards to their dependency has been withdrawn in view of the amendment to same.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-3, 5-7, 10-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

9. Attention is directed to the decision of *Vas-Cath Inc. v. Mahurkar* 19 USPQ2d 1111 (CAFC, 1991):

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This court in *Wilder* (and the CCPA before it) clearly recognized, and we hereby reaffirm, that 35 USC 112, first paragraph, requires a “written description of the invention” which is separate and distinct from the enablement requirement. The purpose of the “written description” requirement is broader than to merely explain how to “make and use”; the “applicant must also convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the “written description” inquiry, *whatever is now claimed*.

10. Attention is directed to the decision in *University of Rochester v. G.D. Searle & Co., et al.* (Fed. Cir. February 13, 2004):

[A]n invention may be enabled even though it has not been described. See, e.g., In re DiLeone, 436 F.2d 1404, 1405 (CCPA 1971) (“[I]t is possible for a specification to enable the practice of an invention as broadly as it is claimed, and still not describe that invention.”). Such can occur when enablement of a closely related invention A that is both described and enabled would similarly enable an invention B if B were described. A specification can likewise describe an invention without enabling the practice of the full breadth of its claims. Finally, still further disclosure might be necessary to satisfy the best mode requirement if otherwise only an inferior mode would be disclosed. Spectra-Physics, Inc. v. Coherent, Inc., 827 F.2d 1524, 1535 (Fed. Cir. 1987).

The “written description” requirement serves a teaching function, as a “quid pro quo” in which the public is given “meaningful disclosure in exchange for being excluded from practicing the invention for a limited period of time.” Enzo, 323 F.3d at 970.

While it is true that this court and its predecessor have repeatedly held that claimed subject matter “need not be described in *haec verba*” in the specification to satisfy the written description requirement, e.g., In re Smith, 481 F.2d 910, 914 (CCPA 1973), it is also true that the requirement must still be met in some way so as to “describe the claimed invention so that one skilled in the art can recognize what is claimed.” Enzo, 323 F.3d at 968. We have further explained that:

[T]he appearance of mere indistinct words in a specification or a claim, even an original claim, does not necessarily satisfy that requirement. . . . A description of an anti-inflammatory steroid, i.e., a steroid (a generic structural term) described even in terms of its function of lessening inflammation of tissues fails to distinguish any steroid from others having the same activity or function. A description of what a material does, rather than of what it is, usually does not suffice. [Regents of the Univ. of Cal. v. Eli Lilly [& Co., Inc.], 119 F.3d [1559,] 1568 [(Fed. Cir. 1997) (“Lilly”)] The disclosure must allow one skilled in the art to

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visualize or recognize the identity of the subject matter purportedly described. Id.

Enzo, 323 F.3d at 968. Similarly, for example, in the nineteenth century, use of the word “automobile” would not have sufficed to describe a newly invented automobile; an inventor would need to describe what an automobile is, viz., a chassis, an engine, seats, wheels on axles, etc. Thus, generalized language may not suffice if it does not convey the detailed identity of an invention. In this case, there is no language here, generalized or otherwise, that describes compounds that achieve the claimed effect.

We of course do not mean to suggest that the written description requirement can be satisfied only by providing a description of an actual reduction to practice. Constructive reduction to practice is an established method of disclosure, but the application must nonetheless “describe the claimed subject matter in terms that establish that [the applicant] was in possession of the . . . claimed invention, including all of the elements and limitations.” Hyatt v. Boone, 146 F.3d 1348, 1353 (Fed. Cir. 1998). But see Enzo, 323 F.3d at 969 (“Application of the written description requirement, however, is not subsumed by the ‘possession’ inquiry. A showing of ‘possession’ is ancillary to the statutory mandate that ‘[t]he specification shall contain a written description of the invention,’ and that requirement is not met if, despite a showing of possession, the specification does not adequately describe the invention.”). The specification must teach the invention by describing it.

For convenience, claims 1, 6, 22, 23, 30 and 32, the only independent claims are reproduced below.

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1. (Currently amended) A method for determining the rate of transcription of a transcriptional unit in a composition of cells, said method comprising:

lysing the cells and obtaining from the cells a preparation of nuclei comprising said transcriptional unit with nascent RNA strands attached thereto and placing same on ice to temporarily inhibit continued transcription and then placing said nuclei under conditions to permit transcription of the transcriptional unit in the presence of biotin-16-UTP, wherein said biotin-16-UTP includes a cleavable linker between the biotin and the UTP, to thereby provide a population of biotin-labeled nascent transcripts; and

isolating said biotin-labeled nascent transcripts by immobilizing same onto streptavidin-labeled iron beads; ~~cleaving said biotin-16-UTP at said cleavable linker to thereby provide a population of nascent RNA transcripts and purifying said RNA transcripts by magnetic separation,~~
cleaving said biotin-16-UTP at said cleavable linker after said magnetic separation to thereby provide a population of nascent RNA transcripts, and quantitatively determining the level of the RNA transcripts by subjecting the RNA transcripts to real-time PCR.

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6. (Previously Added) A method for determining the rate of transcription of one or more transcriptional units in one or more cells, said method comprising:

obtaining from said one or more cells a preparation of nucleic acids comprising said one or more transcriptional units with nascent RNA strands attached thereto,

inhibiting continued transcription of said nucleic acids,

placing said nucleic acids under conditions to permit transcription of said transcriptional unit in the presence of biotin-labeled ribonucleotides, wherein said biotin-labeled ribonucleotides include a cleavable linker between said biotin and said ribonucleotide, to thereby provide a population of biotin-labeled nascent RNA transcripts that include a cleavable linker between said biotin and said ribonucleotide;

isolating said biotin-labeled nascent transcripts by immobilizing said label onto a solid matrix,

cleaving said biotin-labeled ribonucleotide at said cleavable linker to thereby provide a population of nascent RNA transcripts;

and subjecting said nascent RNA transcripts to a real-time polymerase chain reaction to determine the rate of transcription of said one or more transcriptional units.

22. (Currently Amended) A kit for determining the rate of transcription of a transcriptional unit in one or more cells, said kit comprising:

~~enzymes, buffers, and diluents for obtaining nucleic acids;~~

biotin-labeled ribonucleotides, wherein said biotin-labeled ribonucleotides include a cleavable linker between said biotin and said ribonucleotide;

enzymes, buffers, and diluents for transcription of nucleic acids;

a solid matrix;

enzymes, buffers, and diluents for isolating biotin-labeled molecules using said solid matrix; and

enzymes, buffers, and diluents for real time polymerase chain reaction.

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23. (Previously Added) A kit for determining the rate of transcription of a transcriptional unit in one or more cells, said kit comprising:

~~enzymes, buffers, and diluents for obtaining nucleic acids;~~

biotin-labeled ribonucleotides;

enzymes, buffers, and diluents for transcription of nucleic acids;

a solid matrix, wherein said matrix includes a cleavable linker;

enzymes, buffers, and diluents for isolating biotin-labeled molecules using said solid matrix, wherein said matrix includes a cleavable linker; and

enzymes, buffers, and diluents for real time polymerase chain reaction.

30. (New) A method for determining the rate of transcription of one or more transcriptional units in one or more cells, said method comprising:

obtaining from said one or more cells a preparation of nucleic acids comprising said one or more transcriptional units with nascent RNA strands attached thereto,

inhibiting continued transcription of said nucleic acids,

placing said nucleic acids under conditions to permit transcription of said transcriptional unit in the presence of biotin-labeled ribonucleotides to thereby provide a population of biotin-labeled nascent RNA transcripts;

isolating said biotin-labeled nascent transcripts by immobilizing said label onto a solid matrix, wherein said matrix includes a cleavable linker;

cleaving said matrix at said cleavable linker to thereby provide a population of biotin-labeled nascent RNA transcripts;

and subjecting said biotin-labeled nascent RNA transcripts to a real-time polymerase chain reaction to determine the rate of transcription of said one or more transcriptional units.

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32. (New) A kit for determining the rate of transcription of a transcriptional unit in one or more cells, said kit comprising:
biotin-labeled ribonucleotides;

enzymes, buffers, and diluents for transcription of nucleic acids;

a solid matrix, wherein said matrix includes a cleavable linker;

enzymes, buffers, and diluents for isolating biotin-labeled molecules using said solid matrix, wherein said matrix includes a cleavable linker; and

enzymes, buffers, and diluents for real time polymerase chain reaction.

11. For purposes of examination, claims 1-20, 30 and 31 have been interpreted as requiring determination of "the rate of transcription" of any gene in any cell. Said claims have also been interpreted as fairly encompassing the simultaneous determination of the rate of transcription of any and all genes in any and all cells, no matter how diverse or related.

12. Claim 21 and by extension, claim 6 from which it depends, has also been interpreted as encompassing the detection of "a change in activity of one or more transcriptional units at different stages of cellular development."

13. Page 11 defines "transcriptional unit" thusly:

A "transcriptional unit" refers to genetic material which, in a cell, is capable of acting as a template for generating a transcript through the process of transcription. A transcriptional unit may be naturally occurring or generated by, for example, recombinant means. A gene is regarded as an example of a transcriptional unit.

Pages 11-12 of the disclosure clearly set forth numerous embodiments of cells that are to be encompassed by the claimed method.

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The cell may be a prokaryotic or eukaryotic cell. As prokaryotes do not have nuclei as such, a preparation comprising nuclear material including nascent RNAs is prepared. The present method further enables the detection of viral RNA transcripts in a cell.

A prokaryotic microorganism includes bacteria such as Gram positive, Gram negative and Gram variable bacteria and intracellular bacteria. Examples of bacteria contemplated herein include the species of the genera *Treponema*, *Borrelia*, *Neisseria*, *Legionella*, *Bordetella*, *Escherichia*, *Salmonella*, *Shigella*, *Klebsiella*, *Yersinia*, *Vibrio*, *Hemophilus*, *Rickettsia*, *Chlamydia*, *Mycoplasma*, *Staphylococcus*, *Streptococcus*, *Bacillus*, *Clostridium*, *Corynebacterium*, *Pseudomonas*, *Propionibacterium*, *Mycobacterium*, *Ureaplasma* and *Listeria*.

Particularly preferred species include *Treponema pallidum*, *Borrelia burgdorferi*, *Neisseria gonorrhea*, *Neisseria meningitidis*, *Legionella pneumophila*, *Bordetella pertussis*, *Escherichia coli*, *Salmonella typhi*, *Salmonella typhimurium*, *Shigella dysenteriae*, *Klebsiella pneumoniae*, *Yersinia pestis*, *Vibrio cholerae*, *Hemophilus influenzae*, *Rickettsia rickettsii*, *Chlamydia trachomatis*, *Mycoplasma pneumoniae*, *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Streptococcus pyogenes*, *Bacillus anthracis*, *Clostridium botulinum*, *Clostridium tetani*, *Clostridium perfringens*, *Corynebacterium diphtheriae*, *Propionibacterium acnes*, *Mycobacterium tuberculosis*, *Mycobacterium leprae*, *Listeria monocytogenes*, *Pseudomonas aeruginosa* and *Pseudomonas putida*.

A eukaryotic cell includes a yeast or fungus such as but not limited to *Microsporidium*, *Pneumocystis carinii*, *Candida albicans*, *Aspergillus*, *Histoplasma capsulatum*, *Blastomyces dermatitidis*, *Cryptococcus neoformans*, *Trichophyton* and *Microsporum*. The cells may also be from worms, insects, arachnids, nematodes, amoeba, *Entamoeba histolytica*, *Giardia lamblia*, *Trichomonas vaginalis*, *Trypanosoma brucei gambiense*, *Trypanosoma cruzi*, *Balantidium coli*, *Toxoplasma gondii*, *Cryptosporidium* or *Leishmania*. The eukaryotic cells may also be from mammals such as humans, primates, livestock animals, companion animals and laboratory test animals.

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Viruses contemplated herein include HIV, hepatitis virus (e.g. Hep A, Hep B, Hep C and non-A, non-B Hep virus), adenoviruses, papovaviruses, herpes viruses: simplex, varicella-zoster, Epstein-Barr, CMV, pox viruses: smallpox, vaccinia, rhinoviruses, polio virus, rubella virus, arboviruses, rabies virus, influenza viruses A and B, measles virus, mumps virus and HTLV I and II.

14. In order to practice the claimed method for any gene in any one of these identified organisms, one must have the requisite starting materials. Such materials require an identification of the genes of the organism(s) as well as means for isolating nascent RNA strands from each and every such organism. As seen in Claim 1, one is to also perform "real-time PCR." In order to perform PCR, one must possess appropriate primers for each and every gene of interest as well as description of methodologies that permit simultaneous determinations of any number of genes (transcriptional units) in any number of cells, including any stage of development of said cells. A review of the disclosure fails to identify primers that could be used in the identified cells, much less all other cells that exist. Such lacking of a showing of the reagents needed to practice the invention for the full scope of the invention neither satisfied the written description requirement nor demonstrates that applicant, at the time of filing, had possession of the invention.

15. Further review of the disclosure finds 19 examples, which span pages 32-70. None of the examples, however, have been found to result in the determination of "the rate of transcription" for any transcriptional unit. Said 19 examples also fail to additionally show the rate of transcription of any multiple of transcriptional units in one or more cells. And the disclosure, including the 19 examples, has not been found to adequately describe, subsequent to the aforementioned determination of a rate of transcription, "a change in activity of one or more transcriptional units at different states of cellular development."

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16. In view of the above statements of finding, the specification does not contain and adequate written description of the claimed method such that it reasonably suggests that applicant was in possession of the claimed methods at the time of filing.

17. Claims 22-29 and 32 are directed to kits. The components of the kit have been defined in general terms, e.g., enzymes, buffers, diluents, cleavable linker, etc., which speak to how the varied components are to perform or function, not in terms of what they are. The specification does not provide an adequate written description of the kits such that one would be able to recognize one assortment of products and be able to readily determine if one assortment or kit is, or is not, encompassed by the claims.

18. In view of the generic description and functional language provided, the specification has not been found to satisfy the written description requirement of 35 USC 112, first paragraph. Additionally, the specification does not reasonably suggest that applicant, at the time of filing, had possession of the invention.

Response to argument

19. Claims 1-3, 5-7, and 10-32 are rejected under 35 U.S.C. 112, first paragraph, because the best mode contemplated by the inventor has not been disclosed. Evidence of concealment of the best mode is based upon the specification does not set forth an adequate description of how each embodiment of the claims, including determining the rate of transcription, is to be calculated for each of the contemplated cells, and viral expression systems. As presented above, the specification presents 19 examples yet none of which result in the determination of rate of transcription of any one transcriptional unit, much less infinite number of same. Further, the

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specification has not been found to disclose how one is to detect any change in any one or multitude of transcriptional units. In view of the absence of such disclosure, yet in the presence of applicant having sworn that he has invented that which is claimed, claims 1-3, 5-7, and 10-32 are rejected under 35 U.S.C. 112, first paragraph, because the best mode contemplated by the inventor has not been disclosed.

20. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

21. Claims 1-3, 5-7, 10-21, 30 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

22. Claims 1-3, 5-7, 10-21, 30 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: that which will result in the determination of the rate of transcription of any number of transcriptional units in any number of different cells in a simultaneous and/or non-simultaneous manner.

23. It is noted with particularity that the method calls for a determination of a rate of transcription, yet claim 1 only results in a quantitative determination of the level of RNA transcripts. A qualitative or quantitative determination does not establish a rate of transcription.

24. Acknowledgement is made that claim 6 both requires the determination of the rate of transcription and concludes in the last step that one determines the rate by performing PCR. While PCR may well result in the production of amplicons that can in turn be detected and

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possibly quantified, such detection and quantification does not establish a rate for any one transcriptional unit, much less a plurality of same.

25. The claimed methods do not recite steps that would allow for such rate determination when multiple transcriptional units are being evaluated in different cells. As presently worded, one could seemingly use the same label for each and every amplicon derived from the nascent RNA from an infinite number of transcriptional units and from an equally large number and variety of cells, including cells at different stages of development. The claimed method clearly does not recite method steps that would allow for such delineation and transcriptional unit-specific rate determination.

26. The term "real-time" in claims 1, 6, 8, 22, and 23 is a relative term that renders the claim indefinite. The term "real-time" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. Dependent claims 2, 3, 5, 7, 9, 10-21, and 23-27 fail to overcome this issue and are similarly rejected.

Response to argument

27. At page 18 of the response of 26 November 2003 applicant directs attention to page 16, line 23, through page 20, line 22 of the disclosure as providing a description of "real-time PCR."

28. A review of the cited passage, however, has not resulted in finding a definition of the term "real-time PCR." Page 16, for example refers to "real-time analysis technologies," page 17 refers to "real-time DNA amplification" (amplification is not limited to PCR as it includes normal cell division); and page 19 has been found to refer to "real-time fluorescent detection."

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None of these instances has been found to provide a definition of this term. Accordingly, and in the absence of convincing evidence to the contrary, the rejection is maintained.

29. The rejection of claims 18-20 under 35 USC 12, second paragraph, as it relates to the term "exposing" is withdrawn.

30. The rejection of claim 19 as it relates to "endogenous genes", and the rejection of claim 20 as it relates to "transgene," have both been withdrawn in view of the amendments to the claims.

31. The rejection of claim 4 under 35 USC 102(b) has been withdrawn in view of the cancellation of said claim.

Conclusion

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley L. Sisson whose telephone number is (571) 272-0751. The examiner can normally be reached on 6:30 a.m. to 5 p.m., Monday through Thursday.

33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571) 272-0782. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

34. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "B. L. Sisson".

Bradley L. Sisson
Primary Examiner
Art Unit 1634

BLS
18 February 2004